

REMARKS

This is in response to the FINAL Official Action currently outstanding with respect to the above-identified continued prosecution application.

Claims 1-37 were originally presented. Claims 26-37 were elected for further prosecution and Claims 1-27 were cancelled previously, without prejudice. Claims 38-55 were subsequently added by Amendment. Thereafter, Claims 30 and 40 were canceled, without prejudice, and Claims 28, 31, 32, 35, 36, 37, 38, 41, 42, 46, 47 and 52 were amended. By the foregoing Amendment, Applicants respectfully request that Claims 28, 29, 31-39 and 41-55 be amended. Applicants do not presently request the cancellation, withdrawal or addition of any claims. Accordingly, in the event that the foregoing Amendment is granted entry by the Examiner, Claims 28-29, 31-39 and 41-55 as hereinabove presented will constitute the claims under active prosecution in the above-identified application. Applicants respectfully submit that (i) no new matter would be introduced into the claims of this application by the entry of the foregoing Amendment, (ii) entry of the foregoing Amendment would not introduce any new issues requiring further consideration and/or search in the present prosecution, and (iii) entry of the foregoing Amendment would place this application in condition for allowance, or at least in better form for Appeal, as required by 37 CFR 1.116.

The claims of this application as they will stand in the event that the Examiner grants the entry of the foregoing Amendment are set forth in full hereinabove as required by the Rules.

More particularly, in the currently outstanding Official Action, the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC 119(a)-(d) or (f), and also confirmed the receipt of the required certified copy of the priority documentation by the United States Patent and Trademark Office.
2. Acknowledged Applicants' Information Disclosure Statement submitted on May 4, 2004 by providing Applicants with a copy of the Form PTO-1449 that accompanied that filing duly signed, dated and initialed by the Examiner in confirmation of the consideration of the art listed therein;
3. Indicated that the drawings originally filed with this application on 14 September 2000 have been accepted;
4. Provided Applicants with a Form PTO-892 listing a newly cited reference;
5. Objected to the specification on the basis that the Abstract is considered to be grammatically incorrect in its recitation of "... one or more pre-specified units that each include all of the display information and scroll display information associated with the display data therein necessary to the scroll display of that data" – **By the foregoing Amendment Applicants have deleted the current Abstract and substituted a new Abstract therefore in view of the foregoing proposed amendments to the claims of this application. Applicants respectfully submit that the new Abstract proposed hereinabove is grammatically correct and appropriately summarizes the subject matter of the present invention as hereinabove claimed. A decision so holding and entering the new Abstract stated hereinabove in response to this communication is respectfully requested;**

6. Objected to Claims 28, 38 and 46 on the bases that (i) the use of the term “and/or” in the phrase “necessary for the display and/or scroll display” is indefinite; (ii) the spelling of the term “coordinate” is not consistent throughout the claims; and (iii) in claim 46, the phrase “as defined in any one of claims 38, 39, 41, 42, 43, 44, or 45” is grammatically incorrect;
7. Rejected Claim 33 under 35 USC 112, second paragraph, on the grounds that there is no antecedent basis therein for the phrase “said pre-selected unit for scroll display”;
8. Rejected Claims 28, 29, 31-35, 38-39, 41-45 and 48-55 under 35 USC 101 on the grounds that those claims are directed to non-statutory subject matter in that the recited data storage medium with display data recorded thereon is intangible and does not explicitly recite or suggest that the data storage medium causes anything to occur;
9. Rejected Claims 28, 31, 33-36, 38-39, 41 and 43-46 under 35 USC 102(b) as being anticipated by the Portable Document Format Reference Manual, Version 1.2 that is attributed to Bienz;
10. Rejected Claims 29, 37 and 47-55 under 35 USC 103(a) as being unpatentable over the Portable Document Format Reference Manual and also over the Warlock et al reference (US Patent No. 5,634,064);
11. Rejected Claims 32 and 42 under 35 USC 103(a) as being unpatentable over the Portable Document Reference Manual, Version 1.2 and also over the Ota reference (Japanese Patent No. 5-323941); and
12. Required Applicants under 37 CFR 1.111(c) to consider the Mastie reference (US Patent No. 6,480,866) in responding to the currently

outstanding Official Action in view of the Examiner's assertion that the Mastie reference discloses storing a document as a set of distinct pages – **Applicants respectfully submit that 37 CFR 1.111(c) applies to re-examination proceedings and therefore does not require the consideration of the Mastie reference that the Examiner requires. Nevertheless, a brief comment on the Mastie reference as it relates to the present application appears in the Remarks below.**

No further specific comment regarding items 1–4 above is deemed to be required in these Remarks.

Applicants respectfully acknowledge the Examiner's withdrawal his objection and double patenting rejection concerning Claim 52 in view of the previous Amendment in this application.

In addition to the foregoing points, Applicants note that the Examiner has indicated that the nature of what “each pre-specified unit of display data including data to be displayed, and all display information and display control information necessary for the display and/or scroll display of said data to be displayed” is so imprecise as to at least potentially invalidate the claims of this application. Specifically in the latter regard, according to the Examiner, neither display information nor scroll display information necessary for displaying data is defined in the art thereby rendering the meaning of those terms as utilized in the claims of this application improperly subjective and indefinite. Applicants respectfully disagree. The above-quoted phraseology may be somewhat cumbersome and thus difficult to follow, but Applicants respectfully submit that the meanings of the terms utilized therein would be clear to anyone of ordinary skill in the art particularly in view of the descriptive material concerning the same contained in the present specification. By the foregoing Amendment, Applicant are proposing that the cumbersome phraseology referred to by the Examiner be rephrased in a manner that more clearly and definitely conveys its meaning. Entry of those clarifying amendments in response to this communication is respectfully requested.

Further, in the currently outstanding FINAL Official Action, the Examiner for the first time in this prosecution has indicated that the claims of this application are directed to non-statutory subject matter. The Examiner's basis for this assertion is that the claimed data storage medium with display data recorded thereon is not directed to anything tangible, absent a recitation or suggestion that the data storage medium causes something to occur. Again Applicants respectfully disagree. A storage medium with data stored thereon is clearly a tangible item both in that the storage medium itself is tangible and the information stored thereon constitutes a clear recitation and suggestion that the storage medium carries data in a readable form or is altered in such a way that an associated reading device may retrieve the stored data therefrom. Accordingly, Applicants respectfully submit (as the Examiner heretofore apparently has agreed) that the subject matter of the presently pending claims of this application is clearly and definitely statutory. Nevertheless, in the interest of furthering this prosecution, Applicants are herein proposing that the claims of this application be amended so as to specifically recite that the claimed storage medium is "for use with a display device". Entry of these amendments in response to this communication is consequently respectfully requested in response to this communication.

With respect to item 5 above, the only possible grammatical problem that Applicants have noted in the current Abstract appears to be that the term "include" might be better phrased as "includes". Applicants, however, are proposing that the Abstract be rewritten as set forth above because it appears from the remainder of the currently outstanding Official Action that the Examiner is asserting that the above-quoted wording "each pre-specified unit of display data including data to be displayed, and all display information and display control information necessary for the display and/or scroll display of said data to be displayed" (the meaning of which has not been questioned specifically earlier in this prosecution) now is considered to be overly broad to the point of failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention.

In response to the latter assertions, Applicants propose that the current Abstract be deleted and that the Abstract stated hereinabove be substituted therefor. In addition, Applicants propose the foregoing amendments to the claims of this application in order to specifically clarify the facts that (a) the data storage medium is for use with a display device (for the reasons already discussed), and (b) each pre-specified data unit includes (i) display elements or objects for display by the display device and (ii) the management information (elements) necessary for the display, including the scroll display, of those data elements or objects by the display device. Applicants respectfully submit that these amendments simply clarify the claims of this application by more particularly and distinctly stating the previously inherent fact that the present invention is directed to a data storage medium for use with a display device. Further, these amendments are respectfully submitted to also clarify the previously inherently claimed features that the storage medium of the present invention is contemplated to contain (i.e., store) display data elements or objects on the one hand and the management elements (information) associated with the stored display data elements or objects on the other hand together in a manner that allows greater flexibility in the manner in which the display data elements may be displayed by a display device. Entry of these amendments in response to this communication is respectfully requested.

As will be discussed in further detail below, Applicants respectfully submit that the present invention accomplishes the last-stated goal without the need for the separate "page object" files and "control" files" contemplated by the PDF reference in the context of a single, integrated document file. In addition, Applicants respectfully submit that the present invention accomplishes the above-stated goal without "locking in" a particular page or document format as is done in the Mastie reference.

In the latter regard, Applicants respectfully note that the Mastie reference indicates that it stores data by "pages" or by "documents". As far as Applicant can presently determine, however, the electronically stored so-called "page" files of the Mastie reference contain data but do not include the reproduction and display information that is required to be associated with the page data stored in those "page" files for the display thereof (see Mastie, Col. 4, lines 14-28). On the other hand, the so-called "document" files of the Mastie reference (that as far as Applicants can determine constitute one or more completely formatted page units) define a set data format with no ability to display selected portions thereof in a scrolling sequence or otherwise differently from the single predetermined format stored with the display data therein (i.e., in the Mastie reference the format of the "document" and its associated display data are set and saved together as a distinct and unalterable unit with no means for partial viewing, scroll viewing of selected portions thereof or any of the other flexibility provided by a PDF document file or by the present invention).

As alluded to above, Applicants respectfully submit that these comments concerning the Mastie reference are not required in this response under 37 CFR 1.111(c) that relates to re-examination proceedings. They are provided herein simply to advance the present prosecution and as a means of demonstrating the distinctions between the Mastie type of data storage, the PDF document file type of storage and the type of data storage offered by the present invention.

Accordingly, Applicants respectfully submit that the new Abstract and the amended claims both more particularly and distinctly state that the pre-specified data units (or distinct files) of the present invention each include in a single location (i) data elements for display by a display device, and (ii) management elements associated with those data elements for the display thereof. This is clearly and definitely different from the PDF concept wherein the page objects are separated from the display control features of the PDF file. Entry of the foregoing new Abstract and claim amendments in response to this communication, therefore, is respectfully requested.

With regard to item 6, the Examiner has objected to Claims 28, 38 and 46 on the bases that (i) the use of the term “and/or” in the phrase “necessary for the display and/or scroll display” is indefinite; (ii) the spelling of the term “coordinate” is not consistent throughout the claims; and (iii) in claim 46, the phrase “as defined in any one of claims 38, 39, 41, 42, 43, 44, or 45” is grammatically incorrect.

By the foregoing Amendment, Applicants have proposed that the wording of Claims 28 and 38 be changed in a manner such that the term “and/or” is no longer used and the claims recite “...necessary for the display, including the scroll display”. Further, the claims of this application are hereinabove proposed to be amended such that the spelling of the term “coordinate” is consistent throughout. With regard to the Examiner’s assertion that the phrase “as defined in any one of claims 38, 39, 41, 42, 43, 44, or 45” is grammatically incorrect, Applicants by the foregoing Amendment propose to delete the last comma in the last-quoted phrase. Applicants respectfully submit that the foregoing changes to the claims remove all of the bases for the Examiner’s currently outstanding claim objections. Accordingly, entry of these changes in response to this communication is respectfully requested.

With respect to item 7 above, the word “pre-selected” in claim 33 has now been changed to -- pre-specified--. Applicants respectfully submit that that change removes the basis for the Examiner’s outstanding rejection under 35 USC 112, second paragraph. A decision so holding and granting entry to the Applicants’ proposed Amendment in the latter regard is respectfully requested in response to this communication.

With respect to item 8, as indicated above Applicants in response to the Examiner’s rejections under 36 USC 101 are herein proposing that the claims be amended so as to indicate that the storage media are for use with a display device. Applicants respectfully submit that these amendments remove the bases for the Examiner’s currently outstanding rejections under 35 USC 101. A decision so holding and granting entry to the foregoing amendments in this regard in response to this communication is respectfully requested.

The remainder of the currently outstanding rejections of this application contained in the currently outstanding FINAL Official Action is essentially the same as those heretofore stated by the Examiner in previous Official Actions during this prosecution.

Accordingly, with respect to the Portable Document Format reference, Applicants again respectfully submit that it is important to clarify their understanding of the structure and parameters of that reference for the record. The reason for this is that Applicants believe that the basis for the Examiner's continuing rejections of this application arise not from the substantive structures and modes of operation of the present invention *vis a vis* the Portable Document Format reference, but rather arise from a semantic argument based upon the unfortunately imprecise phraseology chosen for use in the reference. This problem is believed to arise from the fact that the reference was written for programmers with the goal of explaining the various facets of the Portable Document Format and the interrelationships of those facets with one another rather than as a strictly accurate description of the contemplated groupings of data and managerial functions within the overall PDF document structure. More specifically, it is Applicants' position that the Portable Document Format is based upon documents taken as a whole, and that each page of a Portable Document Format document is stored in the form of "page objects" *without formatting or display information per se*. In other words, the formatting and display information associated with the various data objects is stored separately from the page objects that describe the content and functionality of each single document page that is accessed via the so-called "page tree". Further, an article bead is one of the managerial elements of the PDF document file structure that functions with the format information such that "page documents" such as that disclosed by Mastie can be utilized (i.e., read) as "articles" made up of sequential selections located at various positions on one or more "pages".

Applicants, therefore, respectfully again submit that the PDF reference, like the Warnok, et al reference, is directed to storing **entire documents or the like** (on a page-by page basis) in a computer memory as a so-called "PDF (Portable Document Format) documents". The difference between the Warnock reference and the PDF Manual reference relied upon in support of the present rejections is as follows. In the Warnock reference, the components of an article contained within a document and the so-called "thread" connecting (associating) those components with one another is added (accomplished) **after** the document is stored. On the other hand, in the PDF reference presently relied upon, the definition and association of article components are accomplished **concurrently with** the storage of the document. Applicants respectfully submit that this distinction is insufficient to justify the Examiner's rejections (i.e., to render the currently pending claims unpatentable).

More particularly, despite the Examiner's detailed analysis of the Portable Document Format Reference Manual, the fact remains that present invention stores the display data associated with an entire data grouping together, rather than in a form dependent upon selections from the catalog of display and formatting functions stored for the entire document. This display data includes image object data, management information associated with each stored image object data and scroll information associated with each image object data, **in distinct, separately controllable pre-specified units (i.e., distinct files) containing only a portion of all of the display data associated with a document to be stored on the storage medium and in direct association with the management information specifically associated therewith.** This is different from the so-called dynamic formatting referred to by the Warlock, et al. reference as being unsatisfactory as well as being different from the disclosures of the Portable Document Format Reference Manual in both of which it is necessary to store the **entire document or the like** in a computer memory as a so-called "PDF (Portable Document Format) document" before any portion ("pre-specified data unit") can be accessed or displayed.

The manner in which the Portable Document Format Reference Manual describes the individual elements of that format relative to the way in which it actually works is unfortunate because the foregoing distinctions are not clear. As alluded to above, it is Applicants' belief that this is the result of the fact that the PDF Reference Manual attempts to describe the Portable Document Format from the perspective of each of its different levels of complexity separately as a means of aiding program developers and others in the use of its various features.

Applicants again respectfully submit and emphasize, however, that a close reading of the PDF Manual clearly suggests that while the Examiner's factual analysis concerning the "bead" concept of identification of article segments and the page co-ordinate definition of each article segment may seem to be supported by the PDF Manual, the Examiner has forgotten (or not noticed) that ***no matter how one approaches the PDF format, it is necessary in the use of each page, or article portion thereof to refer back to information stored as part of the whole PDF file outside of the so-called "page objects" (Note: the PDF Reference Manual discusses PDF files as representative of entire documents including a header, a body, a cross-reference table and a trailer (see chapter 5) wherein the body is made up of various indirect objects such as fonts, pages and sampled images, see page 62).***

Thus, despite other similarities to the present invention, in the article and/or page context, the PDF Reference Manual makes it clear that each selected portion of a so-called "page" that is defined by the so-called "beads" must refer back to the so-called "Contents" parameter of the "page" of which it forms a part. Hence, each article portion must refer back at least to the page information from which it is extracted in order to be appropriately utilized in a scrolling display of an entire article (particularly an entire article having different portions on different pages).

In fact, while it is possible to create PDF units containing one or more separate document pages, there is no provision in the PDF format for saving the data and management information representing defined article segments as separate pre-specified units (Claim 28) or distinct files (claim 38). Further, while the PDF Manual at certain points seems to broadly suggests that each so-called “page” may be basically separate unto itself as an abstract concept, **the true, real world fact is that at least part of the display information and associated scroll information for each such page depends upon information created and saved in the body portion of the PDF file separately from the page objects (data) in question during the course of the creation and saving of an entire PDF format type document.**

In other words, the pre-specified units of the present invention to the extent that they individually represent pages or article portions contain within themselves all of their own display information, including scroll display control information. The PDF Document Format, on the other hand, does not contemplate that each so-called “page” is to be a pre-specified unit in the sense of the present invention. This is because the display control including scroll display information (for example, the required drivers) are embedded in the PDF file and associated with the data to be displayed by higher level operators associated with the data via catalogs that assemble the various objects making up the body of the PDF file to achieve the desired complete document display. Thus, while the PDF Reference Manual at first reading appears to be discussing the manipulation of documents, pages of documents and article threads running through the documents, a more detailed reading of that manual indicates that the foregoing is but the highest level of explanation of the actual PDF concept. ***This is readily apparent to anyone who has used a PDF document obtained from an outside source from the fact that the entire document has to be downloaded and processed by the computer involved before any part of the PDF document can be accessed for use.***

When reduced to its basics, therefore, Applicants respectfully submit that the PDF concept stores “documents” in the form of “pages” (i.e., groups of page objects) separately from at least some of the data contemplated as being necessary for display of the individual image data (page objects), and separately from all of the other information necessary for the association of that image data (“page objects) in the form of appropriate control sequences including the parameters required to achieve the association and control of the display of various combinations of the image data (“page objects”) as desired.

Accordingly, Applicants respectfully submit that the PDF Manual clearly indicates that the PDF concept might be characterized as including a PDF file containing all of the information making up the document in a database sort of collection (the so-called “body”) including various levels of association of that data that can be accessed and displayed or otherwise used. Hence, it is clear that the so-called “threads” connecting the various portions of an article in the PDF Reference Manual are not the same as (or even akin to) the vectors within the article components of the present invention.

In support of the latter interpretation, Applicants respectfully call attention to the fact that at page 27 of the PDF Manual it is indicated that a PDF file contains a PDF document **and other supporting data**. Further, the PDF Manual states that **in addition to a document a PDF file contains the version of the PDF specification and information about the location of important structures within the file**. Further, at page 28 the PDF Manual indicates that the required printer driver consists of a stream of commands **that are converted into PDF operators which are embedded in the PDF file**. Also, at page 62 the PDF Manual indicates that the body of a PDF file consists of a sequence of indirect objects representing a document, and that **those objects represent components of the document such as fonts, pages and sampled images**.

Therefore, Applicants respectfully submit that it is not surprising that in the discussion of optimized PDF files the PDF Manual notes that it is contemplated that ***the various “pages” of a PDF document will share objects and resources.*** It also is not surprising that the various pages are contemplated to have ***common attributes and that those common attributes may and will be “inherited” from the preceding page unless otherwise specified. See, pp 77-78; Section 7.4 and pp. 254, 270 and 274.***

Consequently, as emphasized above and now specifically claimed in each of the independent claims of this application, the PDF Manual does not disclose that the management information including scroll display information associated with each image data object is maintained in association with that image data object in a pre-specified unit (distinct file) within which it is stored, nor does the PDF Manual disclose that a complete formatted document, document portion or the like may be separately reproduced by an associated display device using only the management information including scroll display information contained in each of various pre-specified units (i.e., distinct files) in linked association with one another. The PDF document is stored and utilized as a complete whole even in those cases wherein only a specific article or the like is actually displayed and read by the user.

Also, as discussed briefly above, Applicants respectfully submit that the Examiner has misunderstood the Applicants' use of the word “intervals” in the claims of this application as applying to parameters akin to the “R” parameter of the PDF Reference Manual that identifies the position of an article bead. In fact, the claimed “intervals” more closely correspond to the “V” and “N” parameters of the PDF reference Manual. Thus, in the present specification the Partial Blocks are identified in Fig. 37 as the “intervals”, whereas, the Examiner appears to have thought that the “beads” (article sections) in the PDF Reference Manual correspond to the “intervals” of the present application.

To clarify the latter point, the claims of this application were previously amended so as to clarify the fact that the "intervals" are meant to refer to portions of the scroll path itself in the present invention contrary to the meaning imposed upon that wording by the Examiner.

Applicants respectfully submit that this restatement of their previous arguments in the context of the foregoing clarifying amendments to the Abstract and claims of the above-identified application in response to the Examiner's suggestion that the scope of the previously worded claims was too broad to be patentable, presents a complete record upon which the Examiner may reconsider this application and the Applicants' comments with respect thereto in the context in which they were originally intended (i.e., without the distraction of the Examiner's justification of his previous position based upon an expansive reading of the terminology of the claims not contemplated by the Applicants previously in this prosecution).

In view of the foregoing Amendment and Remarks, it is respectfully submitted that if granted entry by the Examiner, all of the claims that will be present in this application are in condition for allowance or at least in better form for Appeal. Further, it is respectfully submitted that no new issues requiring further consideration and/or search are raised by this Amendment. Accordingly, entry of the foregoing Amendments, reconsideration and allowance of this application pursuant to the terms of 37 CFR 1.116 in response to this communication are respectfully requested.

Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: June 16, 2005

David A. Tucker
SIGNATURE OF PRACTITIONER

Reg. No. 27,840

David A. Tucker
(type or print name of practitioner)
Attorney for Applicant

Tel. No. (617) 517-5508

Edwards & Angell, LLP
P. O. Box 55874
P.O. Address

Customer No. 21874

Boston, MA 02205